SIEMENS

PATENT
Attorney Docket No. 2002P00503WOUS

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re Application of:

Inventor:	R. Neuhaus et al.	)	
		)	Group Art Unit: 2144
Serial No.:	10/501,721	)	
		)	Examiner: M. Anwari
Filed:	July 15, 2004	)	
			Conf. No: 4880

Title **ARRANGEMENT FOR STATE MONITORING FOR COMPONENTS IN A PACKET SWITCHED COMMUNICATION NETWORK**

Commissioner For Patents
P.O. Box 1450
Alexandria, VA 22313-1450

Sir:

SUPPLEMENTAL APPELANTS BRIEF

This Appeal Brief relates to an Appeal from the rejection of claims 10-12, 14, 17-19, 22-35 in the Final Office Action mailed January 24, 2008 and the Notice of Non-Complaint Appeal Brief mailed May 01, 2008. Applicants respectfully submit that the Status of Amendments (page 6) subsequent to the Final Rejection was included in the Appeal Brief mailed on April 24, 2008. However, the dates which indicated the mailing of the Final Office Action and the respective response were incorrect. Applicants have corrected this inadvertent error and have resubmitted the Appeal Brief in its entirety.

I. Real Party in Interest

The real party in interest is Siemens Aktiengesellschaft of Munich, Germany, the assignee of record.

II. Related Appeals and Interferences

There are no known related appeals or interferences.

III. Status of Claims

Claims 1-9, 13, 15, 16, 20, and 21 are canceled. Claims 10, 11, 12, 14, 17-19, and 22-35 are rejected. No claims have been allowed. Claims 10, 11, 12, 14, 17-19, and 22-35 are being appealed.

IV. Status of Amendments

In response to the Final Office Action mailed January 24, 2008, Applicants submitted a response on March 4, 2008 with amendments after final to claims 10 and 26. The Advisory Action mailed March 31, 2008 indicated that these amendments were not entered since the changes presented new issues not previously considered by the examiner and would require further search and consideration. Amendments presented on July 15, 2008 to claims 10 and 26 are as follows:

A. Claim 10

An arrangement, comprising:

a plurality of network components comprising a monitoring component and a monitored component, each component comprising:

a communication unit providing a direct communication to the other components,

a memory ~~to store~~having an address of the monitoring component when the respective component is being monitored,

a processing unit,

the processing unit monitors a state of the respective component and sends state information via the communication unit to the stored address when the respective component is being monitored, and

the processing unit transmits a monitoring instruction to the monitored component when the respective component is monitoring, the monitoring instruction comprises the address of the respective monitoring component and sent directly to the monitored component via the communication unit,

wherein each component is:

addressable in a communication network,

monitorable by each of the other components via the processing unit, and

equipped for monitoring each of the other components via the communication unit.

B. Claim 26

The method as claimed in claim 23, further comprising:

while an acknowledgement to the monitoring instruction is not ~~receive~~ received by the monitoring component,

outputting a corresponding indicator by the monitoring component; and

repeating the transmission of a monitoring instruction at stipulated intervals of time.

V. Summary of Claimed Subject Matter

Aspects of the invention are related to a data processing system with services for providing functionalities.

A. Claim 10

Referring to Figure 1, independent claim 10 recites an arrangement, comprising:

a plurality of network components (B1-B6, C1-C6, D1-D6) comprising a monitoring component C6 and a monitored component D1, each component (B1-B6, C1-C6, D1-D6) comprising (see e.g., pg. 5 lines 10-12, lines):

a communication unit providing a direct communication to the other components (see e.g., pg 6 lines 20-24),

a memory to store an address of the monitoring component when the respective component is being monitored (see e.g., pg 6 lines 31-36),

a processing unit (see e.g., pg. 6 line 38- pg. 7 line 1),

the processing unit monitors a state of the respective component and sends state information via the communication unit to the stored address when the respective component is being monitored (see e.g., pg. 7 lines 1-4), and

the processing unit transmits a monitoring instruction to the monitored component when the respective component is monitoring, the monitoring instruction comprises the address of the respective monitoring component and sent directly to the monitored component via the communication unit ,

wherein each component (B1-B6, C1-C6, D1-D6):

addressable in a communication network (see e.g., pg. 6 lines 10-12),

monitorable by each of the other components via the processing unit (see e.g., pg. 6 lines 2-4) , and

equipped for monitoring each of the other components via the communication unit (see e.g., pg 6 lines 20-22).

B. Claim 12

Referring to Figure 1, dependent claim 12 recites a maximum number of addresses stored is predetermined (see e.g., pg. 3, lines 32-35).

C. Claim 19

Referring to Figure 1, dependent claim 19 recites while an acknowledgement to the monitoring instruction is not receive by the monitoring component C6, the monitoring component C6 repeats the transmission of a monitoring instruction at stipulated intervals of time (see e.g., pg. 9 lines 2-9).

D. Claim 23

Referring to Figure 1, independent claim 23 recites a method for obtaining information about a state or a change of state in a component D1 which is to be monitored and which is part of an arrangement having addressable components (B1-B6, C1-C6, D1-D6) which are connected in the communication network, the method comprising:

monitoring the component D1 by a monitoring component C6 (see e.g., pg. 7 lines 26-29);

transmitting a monitoring instruction by the monitoring component C6, wherein the instruction comprises the address of the monitoring component C6 (see e.g., pg 7 line 32 - pg 8 line 8);

directly interchanging data between the monitored D1 and monitoring C6 components (see e.g., pg 6 lines 20-24);

directly transmitting the monitoring instruction by the monitoring component C6 to the monitored component D1 (see e.g., pg 5 line 14-20);

storing the address of the monitoring component C6 by the monitored component D1 (see e.g., pg 6 lines 31-36);

monitoring a state of the respective monitored component D1 by each monitored component D1 (see e.g., pg 6 line 38 – pg 7 line 4); and

sending state information from the monitored component D1 the monitoring component C6 (see e.g., pg 6 line 38 – pg 7 line 4).

E. Claim 24

Referring to Figure 1, dependent claim 24 recites predetermining a maximum number of addresses which can be stored in memory (see e.g., pg. 3, lines 32-35).

F. Claim 26

Referring to Figure 1, dependent claim 26 recites while an acknowledgement to the monitoring instruction is not receive by the monitoring component,

outputting a corresponding indicator by the monitoring component (see e.g., pg. 8 lines 33-38); and

repeating the transmission of a monitoring instruction at stipulated intervals of time (see e.g., pg. 9 lines 2-9).

VI. Grounds for Rejection to be Reviewed

The following grounds of rejection are requested to be reviewed on appeal:

the rejection of claims 10,-12, 14, 17-19, 22-35 under 35 U.S.C. § 102(e) as being anticipated by Coussement (US PGPub 2002/0114278).

VII. Appellants' Argument

A. Applicants' Invention

Monitoring allows components in a network to know the state of other parties in the network. Thus, when a first component recognizes that a second component is busy, a user of the first component may choose not to call the user of the second component. In this way unsuccessful call attempts may be avoided.

In one aspect of the present invention, each component is addressable in a communication network, each component is monitorable, and each component is equipped for monitoring each of the other components. A monitoring component sends a monitoring instruction to the monitored component wherein the instruction includes the address of the monitoring component. The instruction may also include information about which changes of start should be sent to the monitoring component. The monitored component receives the instruction and stores the address of the monitoring component so that state information may be provided to the monitoring component. A predetermined maximum number of addresses may be used.

In a further aspect of the present invention, the monitoring component includes a visual representation of the state of the monitored component. Yet in another aspect, the sending of the monitoring instruction is repeated at intervals during a time that the monitoring component does not receive an acknowledgment of the monitoring instruction from the monitored component. Still in another aspect, the monitored component may cancel or disable monitoring. The canceling or disabling may be for an individual monitoring component or all of the monitoring components. Another aspect of the present invention provides components to monitor other components independently of the locations of the components.

B. Coussement

Coussement teaches a call center having a reporting system that may be integrated will routing applications (see e.g., par. [0025]). Calls are forwarded to a workstation 43, 45, 47 which are manned by an agent (see e.g., par. [0061]). Calls may be intelligently routed via the computer-telephone-integration (CTI) processors 23, 35. For example, calls may be routed based

on criteria such as agent skills, statistical routing predictive routing priority routing, and agent-availability (see e.g., par. [0058]).

Agent workstations 43, 45, 47 include software 61 for monitoring the present state of an agent's communication capabilities and current states (see e.g., par. [0067]). Proxy agents 18 may be arranged in a hierarchical arrangement so that a proxy agent 18 at the lowest level monitors the agent workstations 43, 45, 47 and a higher level proxy agent monitors the lower level proxy agent 18. The monitored information is reported to a proxy agent 18 (see e.g., par. [0071]) and is used to provide information to the CTI processor 35 for routing purposes (see e.g., par. [0072]).

C. The rejection of claims 10-12, 14, 17-19, 22-35 under 35 U.S.C. § 102(e) as being anticipated by Coussement (US PGPub 2002/0114278)

a) Independent claim 10

Claim 10 recites:

> each component comprising...memory to store an address of the monitoring component when the respective component is being monitored

The Examiner equates the above limitation to various memories provided by Coussement (Figures 1-6 and Abstract & par. 4 & 14 & 16 & 24; storage devices, contact lists and statistics)

Coussement's Abstract recites:

> In a communications network environment, a distributed software application for monitoring terminal and device capabilities of agents operating on the network and rendering data results of the monitoring to subscribing routing applications is provided. The software application comprises a first portion of the software for collecting and sending data about terminal and device capabilities of the target agents and a second portion of the software for receiving the capability data and for presenting the data in usable form to the subscribing routing applications.

Applicants respectfully submit that the Abstract teaches of a distributed software application that collects and sends unspecified terminal data and device capabilities. Collecting and sending unspecified data does not teach or suggest a memory to store the address of the monitoring component let alone storing the address when the respective component is being monitored.

Coussement's par. [0004] recites:

> In a CTI-enhanced call center, telephones at agent stations are connected to a central telephony switching apparatus, such as an automatic call distributor (ACD) switch or a private branch exchange (PBX). The agent stations may also be equipped with computer terminals such as personal computer/video display units (PCNVDU) so that agents manning such stations may have access to stored data as well as being linked to incoming callers by telephone equipment. Such stations may be interconnected through the PC VDU by a local area network (LAN). One or more data or transaction servers may also be connected to the LAN that

> interconnects agent stations. The LAN is, in turn, typically connected to the CTI processor, which is connected to the call switching apparatus of the call center.

Applicants respectfully submit that par. [0004] simply teaches that an agent manning a call station has access to stored data. A mere existence of data does not teach or suggest that the address of the monitoring component is stored let alone storing the address when the respective component is being monitored.

Coussement's par. [0014] recites:

> Due in part to added costs associated with additional equipment, lines, and data ports that are needed to add IPNT capability to a CTI-enhanced call-center, companies are currently experimenting with various forms of integration between the older COST system and the newer IPNT system. For example, by enhancing data servers, interactive voice response units (IVR), agent-connecting networks, and so on, with the capability of conforming to Internet protocol, call data arriving from either network may be integrated requiring less equipment and lines to facilitate processing, storage, and transfer of data.

Applicants respectfully submit that par. [0014] simply teaches that less storage may be required. Teaching that less storage may be required does not teach or suggest that the address of the monitoring component is stored when the respective component is being monitored.

Coussement's par. [0016] recites:

> Keeping contact histories, reporting statistics, creating routing rules and the like becomes more complex as newer types of media are added to communication center capability. Additional hardware implementations such as servers, processors, etc. are generally required to aid full multimedia communication and reporting. Therefore, it is desirable that interactions of all multimedia sorts be analyzed, recorded, and routed according to enterprise (business) rules in a manner that provides seamless integration between media types and application types, thereby allowing agents to respond intelligently and efficiently to customer queries and problems.

Applicants respectfully submit that par. [0016] teaches that contact histories, reporting statistics, and creating routing rules become more complex as newer types of media are added. An increase in complexity of data does not teach or suggest that an address of the monitoring

component is stored. Furthermore, data having statistical information, rules on routing a call, and a history that provides a list of call details does not teach or suggest that an address of the monitoring component is stored in the memory of the respective computer let alone storing the address when the respective component is being monitored.

Coussement's par. [0024] recites:

> There are known software systems that are capable of taking an inventory of the capabilities of a terminal and rendering the information available to a requesting node. In some cases terminals have a special memory dedicated to all kinds of manufacturing and maintenance data, and those memories can usually be read using some special commands. In other cases, there are inventory software programs installed on servers or on remote accessing nodes that are capable of discovering which software programs and versions are installed on the remote node. However, information available to and collected by these methods has not been utilized for interaction purposes such as event routing, either on a data network or within the scope of a communications center.

Applicants respectfully submit that par. [0024] teaches terminals may have memory with manufacturing and maintenance data. Maintenance and manufacturing data cannot reasonably be considered as Applicants address of the monitoring component let alone the address of the monitoring component is stored when the respective component is being monitored.

Applicants respectfully submit that the Examiner has merely found various data which may or not be stored in memory. However, Applicants limitation does not simply recite a data or a memory. Applicants' limitation includes that the memory is on the respective component being monitored and the memory stores an address of a monitoring component when the respective component is being monitored. MPEP 2173.06 states:

> All words in a claim must be considered in judging the patentability of a claim against the prior art.

The Examiner has failed to find a memory (of the respective component) to store an address of the monitoring component when the respective component is being monitored. In view of the above, it is respectfully submitted that independent claim 10 is patentable. Additionally, claim 10 recites:

> each component comprising...a processing unit, the processing unit monitors a state of the respective component and sends state information via the communication unit to the stored address when

> the respective component is being monitored, and the processing unit transmits a monitoring instruction to the monitored component when the respective component is monitoring

The Examiner equates the above limitation to (Figures 1-6 and par. 3-4 & 16; processors running CTI software and processors for multimedia communications and reporting). Applicants respectfully submit that a computer-telephony integration (CTI) processor 23, 31 provides intelligent routing capabilities such as routing based on agent skills and statistical routing (see e.g., par. [0057] & [0058]). Coussement does not teach or suggest that each component comprises a processing unit. Moreover, a processor that provides routing or a processor to aid in multimedia communication and reporting does not teach or suggest a processing unit that:

1) monitors a state of the respective component and sends state information via the communication unit to the stored address when the respective component is being monitored
2) transmits a monitoring instruction to the monitored component when the respective component is monitoring

Claim 10 further recites:

> the monitoring instruction comprises the address of the respective monitoring component and sent directly to the monitored component via the communication unit

The Examiner equates the above limitation to contact histories, reporting statistics and multimedia communication and reporting (Figures 1-6 and Abstract & par. 16, 19). Applicant's respectfully submit that a contact history, a reporting statistic a multimedia communication and a reporting does not teach or suggest an instruction sent from the monitoring component to the monitored component let alone that the instruction that includes the address of the respective monitoring component.

Claim 10 further recites:

> each component: ...monitorable by each of the other components via the processing unit, and equipped for monitoring each of the other components via the communication

The Examiner equates the above limitation to contact histories, reporting statistics and multimedia communication and reporting (Figures 1-6 and Abstract & par. 16, 19). Applicant's respectfully that Coussement teaches a hierarchical monitoring structure where the proxy agent 18 only monitors a workstation agent 43, 45, 47 or proxy agent 18 at a lower level (see e.g., para. [0068], [0070]). Applicant's respectfully submit that Coussement does not teach or suggest that the workstation agent 43, 45, 47 can monitor a proxy 18. Thus, Coussement's does not teach or suggest that each component may be a monitor and each component may be monitored by each component. MPEP 2131 recites:

> A claim is anticipated only if each and every element as set forth in the claim is found, either expressly or inherently described, in a single prior art reference."

Applicants respectfully submit that since Coussement does not teach every aspect of the claimed invention it does not support the 35 U.S.C. 102 rejections. Thus, in view of the above, claim 10 is patentable. Furthermore, dependent claims 11, 12, 14, 17-19, 22, 33-35 which depend on claim 10 are also patentable at least base on their dependency as well as based on their own merits.

b) Independent claim 23

Claim 23 recites:

> transmitting a monitoring instruction by the monitoring component, wherein the instruction comprises the address of the monitoring component

Applicants respectfully submit that this limitation is similar to the limitation of claim 10 that recites "the monitoring instruction comprises the address of the respective monitoring component and sent directly to the monitored component via the communication unit". Claim 23 further recites:

> storing the address of the monitoring component by the monitored component

Applicants respectfully submit that this limitation is similar to the limitation of claim 10 that recites "memory to store an address of the monitoring component when the respective component is being monitored".

For at least the same reasons provided above in the claim 10 section for these limitations, independent claim 23 is patentable. Furthermore, dependent claims 24-32, which depend on claim 23, are also patentable at least based on their dependency as well as based on their own merit.

c) Dependent claims 12 and 24

Claim 12 recites:

> a maximum number of addresses stored is predetermined

Claim 24 recites:

> predetermining a maximum number of addresses which can be stored in memory

The Examiner indicates that a storage device is found in Figures 1-6 and Par. 6 & 14 and states "it is inherent that a storage device will have a maximum number of addresses stored in it." Applicants respectfully submit that memory inherently has a maximum storage capacity. However, not all memory will store an address, let alone an address of monitoring device and moreover have a maximum number of addresses which are predetermined. MPEP 2112 (IV) recites:

> The fact that a certain result or characteristic may occur or be present in the prior art is not sufficient to establish the inherency of that result or characteristic. *In re Rijckaert*, 9 F.3d 1531, 1534, 28 USPQ2d 1955, 1957 "To establish inherency, the extrinsic evidence 'must make clear that the missing descriptive matter is necessarily present in the thing described in the reference, and that it would be so recognized by persons of ordinary skill. Inherency, however, may not be established by probabilities or possibilities. The mere fact that a certain thing may result from a given set of circumstances is not sufficient.' "

In view of the above, it is respectfully submitted that dependent claims 12 and 24 are patentable.

d) Dependent claims 19 and 26

Claim 19 recites:

> wherein while an acknowledgement to the monitoring instruction is not receive by the monitoring component, the monitoring

> component repeats the transmission of a monitoring instruction at stipulated intervals of time.

Claim 26 recites:

> repeating the transmission of a monitoring instruction at stipulated intervals of time

The Examiner equates the above limitation to a periodic polling (Figures 1-6 and par. 94). Coussement's par. [0094] recites:

> As another example, it is well-known in the art that capabilities of communication centers are in need of continual or at least periodic upgrading. New hardware and software is developed, and cannot be installed uniformly across multiple hardware architectures instantly. Such upgrading also takes time. Capability-based routing, wherein routers have up-to-date information on agent resource capabilities, can guide efficient and reasonable routing as resources change. Even in stable situations, in diverse systems, not all stations will be standard, and in some instances it may well be advisable to have certain agents enabled is special ways to provide for special needs. The ability provided by the present invention to periodically poll each agent station for hardware and software capability allows for efficient and highly successful routing of all sorts of communication events, not just COST or IP telephone events. Moreover, in the case of upgrading, the ability to monitor which agents are upgraded and which are not, so communication events requiring upgraded agents can be properly routed, removes considerable pressure from those responsible for upgrading projects, which now can be accomplished over a longer time period rather than in a rush.

Applicants respectfully submit that par. [0094] teaches periodically polling each agent station for hardware and software capability provides routing improvements and to determine which agents are upgraded and which are not. Applicants further submit that a polling for hardware of software capability cannot reasonably be considered Applicants' repeating of the transmission of a monitoring instruction at stipulated intervals of time for at least the following reasons.

1. Determining a hardware and software capabilities cannot reasonably be considered a sending of an instruction with an address of the monitoring component.

2. Determining a hardware and software capabilities does occurs periodically and not while an acknowledgement to the monitoring instruction is not received by the monitoring component.
3. Since each component is monitorable, each component must be able to receive the instruction. Coussement teaches only an agent station is polled.

In view of the above, it is respectfully submitted that dependent claims 19 and 26 are patentable.

VIII. Conclusion

For the foregoing reasons, it is respectfully submitted that the rejections set forth in the outstanding Office Action are inapplicable to the present claims. The honorable Board is therefore respectfully requested to reverse the rejection of the Examiner and to remand the application to the Examiner with instructions to allow the pending claims. Please grant any extensions of time required to enter this paper. Please charge any appropriate fees due in connection with this paper or credit any overpayments to Deposit Acct. No. 19-2179.

Respectfully submitted,

Dated: 5-21-2008

By: Janet D. Hood

Janet D. Hood
Registration No. 61,142
(407) 736-4234

Siemens Corporation
Intellectual Property Department
170 Wood Avenue South
Iselin, New Jersey 08830

IX. Claims Appendix

1.-9. (canceled)

10. (previously presented) An arrangement, comprising:

a plurality of network components comprising a monitoring component and a monitored component, each component comprising:

a communication unit providing a direct communication to the other components,

a memory to store an address of the monitoring component when the respective component is being monitored,

a processing unit,

the processing unit monitors a state of the respective component and sends state information via the communication unit to the stored address when the respective component is being monitored, and

the processing unit transmits a monitoring instruction to the monitored component when the respective component is monitoring, the monitoring instruction comprises the address of the respective monitoring component and sent directly to the monitored component via the communication unit,

wherein each component:

addressable in a communication network,

monitorable by each of the other components via the processing unit, and

equipped for monitoring each of the other components via the communication unit.

11. (previously presented) The arrangement as claimed in claim 10, wherein the communication network is a packet switched network.

12. (previously presented) The arrangement as claimed in claim 10, wherein a maximum number of addresses stored is predetermined.

13. (canceled)

14. (previously presented) The arrangement as claimed in claim 10, wherein the monitoring instruction comprises information about which changes of state are to be sent as state information.

15. (canceled)

16. (canceled)

17. (previously presented) The arrangement as claimed in claim 10, wherein the monitoring component uses the information about states or changes of state for visual indication.

18. (previously presented) The arrangement as claimed in claim 10, wherein the monitored component can disable monitoring by individual or all monitoring components.

19. (previously presented) The arrangement as claimed in claim 10, wherein while an acknowledgement to the monitoring instruction is not receive by the monitoring component, the monitoring component repeats the transmission of a monitoring instruction at stipulated intervals of time.

20. (canceled)

21. (canceled)

22. (previously presented) The arrangement as claimed in claim 19, wherein the information about the transmitability of the monitoring instruction can be used to determine a corresponding state for the component which is to be monitored.

23. (previously presented) A method for obtaining information about a state or a change of state in a component which is to be monitored and which is part of an arrangement having addressable components which are connected in the communication network, the method comprising:

monitoring the component by a monitoring component;

transmitting a monitoring instruction by the monitoring component, wherein the instruction comprises the address of the monitoring component;

directly interchanging data between the monitored and monitoring components;

directly transmitting the monitoring instruction by the monitoring component to the monitored component;

storing the address of the monitoring component by the monitored component;

monitoring a state of the respective monitored component by each monitored component; and

sending state information from the monitored component the monitoring component.

24. (previously presented) The method as claimed in claim 23, further comprising:

predetermining a maximum number of addresses which can be stored in memory.

25. (previously presented) The method as claimed in claim 23, further comprising:

canceling the monitoring by the monitored component.

26. (previously presented) The method as claimed in claim 23, further comprising:
while an acknowledgement to the monitoring instruction is not receive by the monitoring component,

outputting a corresponding indicator by the monitoring component; and

repeating the transmission of a monitoring instruction at stipulated intervals of time.

27. (previously presented) The method as claimed in claim 26, wherein information about the ability to transmit the monitoring instruction is used to determine a corresponding state for the component which is to be monitored.

28. (previously presented) The method as claimed in claim 23, wherein the monitoring the component comprises:

receiving a command from a user of the monitoring component, the command comprising the telephone number of the monitored component; and

converting the telephone number to a network address for the monitored component,

wherein the monitored instruction is sent using the network address for the monitored component.

29. (previously presented) The method as claimed in claim 23, wherein the user of the monitoring component initiates a call to the monitored component.

30. (previously presented) The method as claimed in claim 29, wherein the user is provided an input field for inputting a text message to be sent to the monitored component when the monitored component is busy.

31. (previously presented) The method as claimed in claim 23, wherein the state information comprises a change of state of the monitored component.

32. (previously presented) The method as claimed in claim 31, wherein the monitoring instruction comprises information about which changes of state are to be sent a state information.

33. (previously presented) The arrangement as claimed in claim 11, wherein each of the components are voice over IP telephones.

34. (previously presented) The arrangement as claimed in claim 10, wherein each of the components are telephony clients.

35. (previously presented) The arrangement as claimed in claim 12, wherein each of the components is selected from the group consisting of telephone, telephony client, server, gateway, and gatekeeper.

X. Evidence Appendix

None

XI. Related Procedings Appendix

None